

CLAIMS

1. A continuously variable transmission system for conveying rotation and torque from a motor to a load, comprising:

- a first gear - set for receiving torque and rotation from a motor and for delivering said torque and rotation in two shafts;
- a second gear - set for receiving torque and rotation from said first gear – set in two shafts, and for transferring torque and rotation to said driven load;
- one rotation - reversing gear - set for reversing the direction of rotation of the rotation associated with one shaft of said first gear - set, and
- at least one means for modifying the rotation rate of at least one shaft of said first gear – set.

15 2. A continuously variable transmission system for conveying rotation and torque from a motor to a load as in claim 1, and wherein a fluid coupling is employed in each of said shafts for transferring rotation and torque from said first gear - set to said second gear - set.

20 3. A continuously variable transmission system for conveying rotation and torque from a motor to a load as in claim 2, and

wherein a fluid quantity controller determines the quantity of fluid in said at least one fluid coupling for modifying the rotation rate in said shafts.

- 5 4. A continuously variable transmission system for conveying rotation and torque from a motor to a load as in claim 1 and wherein an additional gear - set means is disposed between said first gear - set and said second gear - set for adapting the rotation rate of said first gear - set to said second gear - set.

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5. A continuously variable transmission system for conveying rotation and torque from a motor to a load as in claim 1 and wherein said means for modifying the rotation rate is applied to one outlet shaft of said first gear - set.

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6. A continuously variable transmission system for conveying rotation and torque from a motor to a load as in claim 1 and wherein said means for modifying the rotation rate is applied to two outlet shafts of said first gear - set.

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7. A continuously variable transmission system for conveying rotation and torque from a motor to a load as in claim 1 and wherein said load is a vehicle.

8. A continuously variable transmission system for conveying rotation and torque from a motor to a load as in claim 1 and wherein said driven load is an industrial machine.
- 5 9. A method for changing the overall gearing ratio of a power transmission system by modifying the rotation rate of different gears of a same first gear – set, and wherein two different gears of a second gear - set receive rotation and torque from said first gear – set and from a rotation reversing gear set respectively,
- 10 and wherein a driven load receives torque and rotation from said second gear – set.
10. A method as in claim 9 and wherein said modification is achieved by using torque from one outlet of said first gear – set
- 15 to modify the rotation rate of another outlet of said first gear -set.
11. A method as in claim 9 and wherein said modification is achieved by using torque from an inlet shaft of said first gear - set to modify the rotation rate of an outlet of said first gear -set.
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12. A method as in claim 9 and wherein said rotation rate modification is carried out by frictionally reducing the rotation rate of one gear of said first gear – set with respect to a frame of said transmission system.

13. A method as in claim 9 and wherein the rotation rates of two outlet gears of said first gear - set are modified each with respect to a frame of said transmission system.
- 5 14. A method as in claim 9 and wherein said modification is achieved by using torque from an external power source to modify the rotation rate of at least one outlet of said first gear - set.
- 10 15. A method for continuously changing the rotation rate and torque provided by a power transmission system to a driven load wherein the amount of fluid in at least one of two fluid couplings, wherein said two fluid couplings receive rotation and torque from different gears of a same first gear – set, and wherein two different gears of a second gear - set receive rotation and torque from said fluid couplings, and wherein a driven load receives torque and rotation from said second gear - set, and wherein one rotation reversing gear - set is employed for reversing the direction of rotation prior to conveying the rotation to said second gear - set.
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- 25 16. A method for continuously changing the overall gearing ratio of a power transmission system as in claim 15, by controlling the amount of fluid in at least one of two fluid couplings, wherein

said two fluid couplings receive rotation and torque from different gears of a same first gear - set, and wherein two different gears of a second gear - set receives rotation and torque from said fluid couplings, and wherein a driven load receives torque and rotation from said second gear - set, and wherein rotation reversing is implemented before said second gear - set receives rotation and torque at one gear.